

## CLAIMS

What is claimed is:

- 1 1. A method of making a heat sink, the method comprising:
  - 2 obtaining a quantity of thermally conductive metal; and
  - 3 forming from the quantity a plurality of fins extending outwardly from a
  - 4 core in an asymmetric pattern, the core having a central axis, each fin having a base
  - 5 coupled to the core substantially parallel to the central axis.
  
- 1 2. The method recited in claim 1, wherein the fins are formed curved, the  
2 method comprising:
  - 3 bending a portion of each fin in substantially the same relative direction.
  
- 1 3. The method recited in claim 2, wherein before bending the method  
2 comprises:
  - 3 separating the portion of each fin from the core.
  
- 1 4. The method recited in claim 3, wherein separating comprises:
  - 2 forming a cavity or channel in the core a predetermined distance along the
  - 3 central axis.
  
- 1 5. The method recited in claim 1, wherein the fins are formed straight, the  
2 method comprising:
  - 3 bending a portion of each fin in substantially the same relative direction.
  
- 1 6. The method recited in claim 5, wherein before bending the method  
2 comprises:
  - 3 separating the portion of each fin from the core.

1    7.    The method recited in claim 6, wherein separating comprises:  
2               forming a cavity or channel in the core a predetermined distance along the  
3               central axis.

1    8.    The method recited in claim 1, wherein forming comprises extruding the  
2               quantity of thermally conductive metal through an extrusion die.

1    9.    The method recited in claim 1, wherein the thermally conductive metal  
2               comprises aluminum, and wherein the fins have an aspect ratio in the range of 10:1  
3               to 12:1 or in the range of 14:1 to 16:1.

1    10.   The method recited in claim 1, wherein the thermally conductive metal  
2               comprises aluminum, and wherein the radius at the base of the fins is in the range of  
3               1.0 to 1.2 millimeters.

1    11.   The method recited in claim 1, wherein forming comprises making a central  
2               cavity within the core.

1    12.   The method recited in claim 11, wherein forming comprises extruding the  
2               quantity of thermally conductive metal through an extrusion die.

1    13.   The method recited in claim 12 and further comprising:  
2               inserting a thermal plug into the cavity.

1    14.   The method recited in claim 13, wherein the thermal plug comprises copper.  
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1    15.   A method comprising:  
2               forming from thermally conductive metal a plurality of fins extending  
3               outwardly from a core in an asymmetric pattern, the core having a central axis, each  
4               fin having a base coupled to the core substantially parallel to the central axis.

1    16.    The method recited in claim 15, wherein the fins are formed curved, the  
2    method comprising:  
3                 bending a portion of each fin in substantially the same relative direction.

1    17.    The method recited in claim 16, wherein before bending the method  
2    comprises:  
3                 separating the portion of each fin from the core.

1    18.    The method recited in claim 17, wherein separating comprises:  
2                 forming a cavity or channel in the core a predetermined distance along the  
3    central axis.

1    19.    The method recited in claim 15, wherein the fins are formed straight, the  
2    method comprising:  
3                 bending a portion of each fin in substantially the same relative direction.

1    20.    The method recited in claim 19, wherein before bending the method  
2    comprises:  
3                 separating the portion of each fin from the core.

1    21.    The method recited in claim 20, wherein separating comprises:  
2                 forming a cavity or channel in the core a predetermined distance along the  
3    central axis.

1       22.     A method of making a heat sink comprising:  
2              forming a core having a central axis and a surface to thermally contact a  
3     heat-generating component; and  
4              forming from thermally conductive metal a plurality of fins extending  
5     outwardly from the core, each fin having a base and a tip, wherein the bases are  
6     coupled to the core substantially parallel to the central axis, wherein the tips define  
7     the periphery of a face to face the component, and wherein the face comprises inter-  
8     fin openings.

1       23.     The method recited in claim 22, wherein the fins are formed curved, the  
2     method comprising:  
3              bending a portion of each fin in substantially the same relative direction.

1       24.     The method recited in claim 23, wherein before bending the method  
2     comprises:  
3              separating the portion of each fin from the core.

1       25.     The method recited in claim 24, wherein separating comprises:  
2              forming a cavity or channel in the core a predetermined distance along the  
3     central axis.

1       26.     The method recited in claim 22, wherein the fins are formed straight, the  
2     method comprising:  
3              bending a portion of each fin in substantially the same relative direction.

1       27.     The method recited in claim 26, wherein before bending the method  
2     comprises:  
3              separating the portion of each fin from the core.

1    28.    The method recited in claim 27, wherein separating comprises:  
2               forming a cavity or channel in the core a predetermined distance along the  
3       central axis.